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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/041,846 | 10/23/2001 | Darryl Y. Sasaki | | 5512 |

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EXAMINER

LAVILLA, MICHAEL E

ART UNIT PAPER NUMBER

1775

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,846

Applicant(s)

SASAKI ET AL.

Examiner

Michael La Villa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2004 and 02 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Claims 1-11, Group I, in the replies filed on 9 November 2004 and 2 December 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
 4. A person shall be entitled to a patent unless –
 5. (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
 - (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
6. Claims 1-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Waggoner, Last, Kotula, and Sasaki, "Self-assembled columns . . .," JACS 123 (3) 496-7 (2001) for the reasons of record of the Office Action mailed on 22 June 2004.

7. Claims 1, 3-7, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Safinya et al. USP 6,358,523 for the reasons of record in the Office Action mailed on 22 June 2004.
8. Claims 1-7, 9, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Firestone et al. USP 6,537,575 for the reasons of record in the Office Action mailed on 22 June 2004.

Response to Amendment

- I. In view of applicant's arguments and amendments, applicant traverses the section 112, second paragraph rejections of the Office Action mailed on 22 June 2004. Rejections are withdrawn.
- II. In view of applicant's arguments and amendments, applicant traverses the incorporation-by-reference objection to the Specification of the Office Action mailed on 22 June 2004. Objection is withdrawn.
- III. The meaning of applicant's argument at the four and three lines from the bottom of page 10 of applicant's Response ("3, and 4 have been . . . antecedent basis") is not understood and is treated as being extraneous text to be ignored.
- IV. In view of applicant's arguments and amendments, applicant traverses the section 102 rejection over Lenk of the Office Action mailed on 22 June 2004. Rejection is withdrawn.

V. In view of applicant's arguments and amendments, applicant traverses the section 102 rejection over Waggoner et al. of the Office Action mailed on 22 June 2004. To overcome this rejection, applicant has submitted a declaration by Inventor Sasaki, which declaration has been considered. Inventor Sasaki declares that "the contributions of P. Kotula, said co-author, was derived from the inventor herein. The co-author did not contribute to the invention of the subject matter claimed in the present application." The requirements for a declaration to remove the article as prior art are described in the MPEP. See MPEP 2132.01. Particularly, a specific declaration "by the applicant establishing that the article is describing applicant's own work" is required. The problems with the provided declaration are two-fold. Firstly, the provided declaration is not provided by the applicant, namely, all of the inventors. Rather a declaration by only one inventor has been provided. Secondly, the provided declaration says that contributions of P. Kotula were derived from Inventor Sasaki. The declaration does not explain whether the work described in the article is that of the applicant and not the work of P. Kotula, P. Kotula and others, or some other entity other than the listed inventive entity. The declaration does not say

what P. Kotula contributed. In view of these deficiencies, the article cannot be removed as available prior art at this time, and so the rejection is maintained.

- VI. In view of applicant's arguments and amendments, applicant traverses the section 102 rejection over Safinya of the Office Action mailed on 22 June 2004. Applicant argues that the claimed invention can be distinguished from Safinya on several grounds. Applicant argues that the materials of Safinya extend without any boundary. However, there must be a boundary since there is a finite amount of material. Applicant argues that the materials of Safinya have lipid bilayers stacked on macromolecules, whereas applicant's materials have lipid bilayers stacked on each other. Applicant's claims do not require direct stacking of bilayer molecules and contemplate intercalating ligands. Applicant argues that the materials of Safinya do not form stacked structure since they extend laterally to an indefinite extent. Since the materials form stacked structures, they can be said to form columnar structures. Applicant has not claimed any particular stacked geometry that precludes Safinya from anticipating this claimed feature. Rejection is maintained.

VII. In view of applicant's arguments and amendments, applicant traverses the section 102 rejection over Firestone of the Office Action mailed on 22 June 2004. Applicant argues that the stacked rod-like micelles are not lipid bi-layer molecules stacked in a columnar structure. Each rod can be identified as a lipid bi-layer molecule. The rods stack on one another. The resulting agglomeration can be viewed as having a stacked columnar structure. Rejection is maintained.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael La Villa whose telephone number is

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(571) 272-1539. The examiner can normally be reached on Tuesday, Thursday, and alternating Fridays.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael La Villa
25 January 2005